

The Fictional Coordinate Concept in the Special Theory of Relativity and the Search for Another Alternative⁽⁴⁾

– The outer space has one absolute coordinate system. –

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Abstract

1. Albert Einstein set two coordinates of S and S' in a relative structure in deriving the Lorentz coordinate transformation equation. However, the two coordinates of S and S' are fictional phases that are not based on the inertial system. Additionally, time(t) is pure scalar, and the time axis(T) composed of scalar time, is also a fictional phase. This logic suggests that an unrevealed and unknown secret is hidden in the inner properties of the Lorentz coordinate transformation equation.

2. As in the derivation of the Lorentz coordinate transformation equation, when dealing with the relative relationship of S and S' , there is a need for one basic coordinate system that has a more fundamental basis than the two coordinate systems(S, S'). Therefore, the Lorentz coordinate transformation equation can be viewed as derived using one basic coordinate system. In the perspective of this logic, the coordinate concept in the special theory of relativity must be discarded.

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I. Introduction

The special theory of relativity of Einstein repudiates the medium(ether) of light waves and selected the spatial model of the vacuum structure. Here, it is possible to set the two coordinates, S and S' , in a relative structure and the law of the constant speed of light can be accepted in a favorable position. However, the spatial model of the vacuum structure and the coordinate concept in the special theory of relativity have a serious logical flaw.

As Bradley's aberration of light signifies, outer space formally conserves the progress path and propagation speed of light waves. Additionally, the observer of motion passes through outer space while space embraces the motion of the observer. Therefore, in the position of an observer of motion, the propagation speed of the measured light wave is expected to have a summation structure of $C+V$. In order to verify this summation structure of the speed of light, Michelson–Morley performed the interferometer experiment.

However, in the interferometer experiment, the interference fringes of light waves did not move. This experimental result signifies that the propagation speed of the progress path of light waves is not conserved in outer space, and that the law of the constant speed of light is valid. Therefore, the effect of the aberration of light that leads to the addition of speed of light, and the experimental results of the interferometer that disprove the law of the constant speed of light are contradictory. One claim must be sacrificed in this situation.^[2]

<<http://batangs9.com/E-2.pdf>>

The interference fringes of light waves did not move in the interferometer experiment of Michelson–Morley because the gravitational field of the earth has its own space system independent from outer space. Thus, the space system of the earth's gravitational field revolves together with the earth's sphere. The earth's gravitational field has its own independent space system specifically introduced in the author's book(Title: Jeoldaeseangiron Book 1 and 2).

The author's claim that the earth's gravitational field has its own independent space system, and Fresnel's claim that the earth's orbital motion pulls around ether in outer space, can be compared with results in similar situations. However, the author's claim and Fresnel's claim are explained through completely different principles, and the logical background of the two arguments are also totally different.^[2]

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The logical flaw in the coordinate concept of the special theory of relativity will be explained in the body of this thesis. In addition, the fictiveness of the law of the constant speed of light will be pointed out and a new alternative will be proposed.

II. Body

The disposition of all physical phenomena are certainly expressed through a coordinate system. Therefore, in expressing physical phenomena, the correct setting of the coordinate system should be prioritized. However, in deriving the Lorentz coordinate transformation equation, Einstein has set the two coordinates S and S' with unclear origin in a relative structure. Here, the two coordinate systems S and S' are fictional phases that do not exist substantially. The anomalous process deriving the Lorentz coordination transformation equation using these two coordinate systems(s, s') of fictional phase will be looked into.

1. The conditions for the existence of the inertial system and the coordinate system.

1-1. In the convenient precondition to introduce the special theory of relativity, Einstein argued the “**accompaniment system of the inertial system and the coordinate system**” wherein the inertial system and the coordinate system agree as the same phase. For instance, when setting an independent coordinate system regarding the inertial system of a train in motion, the “**accompaniment system of the inertial system and the coordinate system**” is valid. Here, the background of the coordinate system must be composed of the inertial system of the train, and the coordinate system exists due to the basis of the inertial system.

Meanwhile, in order to derive the Lorentz coordinate transformation equation, the two coordinate systems S and S' were respectively set in a relative structure with regards to the observer and the object in motion. However, the two coordinate systems S and S' are fictional phases that are not based on the inertial system. This is because the inertial system does not exist in the background of the two coordinate systems(S, S').

The “**accompaniment system of the inertial system and the coordinate system**” was argued in the introductory process of the special theory of relativity. However, in the process of deriving the Lorentz coordinate transformation equation, the “**accompaniment system of the inertial system and the coordinate system**” was not accepted. Therefore, one of the claims must be sacrificed.

1-2. In the perspective of ordinary logic, the inertial system of the train is defined as the volume of the train. Therefore, the range of the inertial system must be limited to the interior of the train's volume. Additionally, the range of the coordinate system set in relation to the

inertial system of a moving train must also be limited to the interior of the train's volume. However, Einstein misunderstood (made a mistake) that the coordinate system of the train extends beyond the volume of the train, and until the last boundary of the universe.

If the coordinate system is extended to the exteriors of the train, the coordinate system of this extended part is not based on the inertial system. Therefore, the **“accompaniment system of the inertial system and the coordinate system”** cannot be applied to the coordinate system of the extended part. In addition, the physical phenomena of the exterior of the train, expressed through the coordinate system of the extended part must possess an expected value of a temporary measure.

The motion's speed and the train's momentum maintain a proportional relationship, and their proportional relationship is clearly expressed through the coordinate system in outer space. This is because the coordinate system of the outer space comprehensively embraces the speed of motion and the momentum of the train. Therefore, there is no need to set an independent coordinate system regarding the moving train. Hence, the coordinate system of the train in motion is a fictitious phase.

1-3. The coordinate system set by an observer regarding a moving object under observation has no chance for effective use. In addition, when observing the motion of an observer in the position of the object, the coordinate system of the observer does not have a chance for effective use. Therefore, a coordinate system set regarding the subject of observation can be seen as an unnecessary fictional phase.

As stated in the claim of Einstein, when two coordinates S and S' , set for the observer and the object are relatively displaced, the phase of the two coordinate systems is mutually accepted. Thus, the coordinate

system of the observer(s) and the coordinate system of the object(s') are superimposed simultaneously. In this situation of simultaneous superimposition, the relationship between the two coordinate systems cannot keep a relative structure of $S \leftrightarrow S'$.

The introduction of the special theory of relativity has a premise condition wherein the two coordinate systems S and S' are placed in a relative structure of $S \leftrightarrow S'$. However, in the process of deriving the Lorentz coordinate transformation equation, the relative structure of $S \leftrightarrow S'$ is broken due to the simultaneous superimposition of the two coordinate systems. Considering the validity of the Lorentz coordination transformation equation, the coordinate concept of the special theory of relativity must be discarded.

1-4. Just like what Bradley's aberration of light signifies, outer space formally preserves the progress path and the propagation speed of light waves. Space exists in the background of light waves and space comprehensively embraces the progress path and the propagation speed of light waves. Therefore, the propagation speed of light waves can be expressed as an absolute value in relation to outer space.

Einstein set an independent coordinate system regarding the material particle of the elementary particles in motion. However, the coordinate system of the material particle of the elementary particles in motion can penetrate outer space like an invisible ghost. In other words, the system of a coordinate system composed of spatial distances does not follow the material particle of the elementary particles in motion. Therefore, the coordinate system of the material particle of the elementary particles in motion should be viewed as a fictional phase.

The inertial system of a moving train is composed of the distribution of

minute elementary particles. Furthermore, all elementary particles of a moving train individually passes through space, in resemblance to the movement of bullets. Therefore, the overall kinetic energy of the train is distributed to all elementary particles, and all elementary particles of the train must individually possess a speed of motion. This individual kinetic energy and speed of motion of elementary particles may be expressed as an absolute value in outer space.

The inertial system of the train in motion, composed of the distribution of elementary particles, passes through (outer space) like an invisible ghost. Therefore, the inertial system of a moving train cannot independently have its own area. This inertial system of a moving train must only be understood as an abstract image. Thus, the inertial system of a moving train(the distribution range of elementary particles) is a fictional phase that does not substantially exist. Of course, the coordinate system set in relation to the inertial system of a moving train is also a fictional phase.

All objects in the universe is composed of the distribution of elementary particles. Therefore, the principle of moving objects must be interpreted as an individual characteristic of elementary particles in the perspective of elementary particle units. For instance, interpreting the falling motion of gravitational force possessed by all objects in the perspective of elementary particle units, the principle of gravity can be conveniently understood.

In the new gravitational theory of the author, the principle of gravity is interpreted in the perspective of elementary particle units. Thus, the gravitational field of the Earth is formed according to the functional properties of elementary particles, and the functional properties of elementary particles are reflected as the motion effect of free fall due to the role of the gravitational field. The principle behind gravity,

interpreted in the perspective of elementary particle units is specifically introduced through the books (Title: Jeoldaeseangiron Book 1 and 2) of the author.

1-5. Einstein's special theory of relativity dealt with the motion of objects in the perspective of physical units, like how Galileo has argued. For instance, the motion effect of the train was perceived as a simple displacement of the inertial system. This inertial system logic was introduced because during the time when the special theory of relativity was presented (1905), the existence of elementary particles - a unit smaller than the physical units, is not yet recognized. Therefore, the special theory of relativity must be included in Galileo's classical physics.

Einstein argued that the range of the inertial system is not defined by a clear boundary. For instance, the boundary of the inertial system of a convertible car cannot be clearly defined. Therefore, the distance of an atom from another atom, that configures the epidermal surface of an object cannot be used as the boundary of the inertial system. In other words, Einstein has set an abstract range for the inertial system, and further set a coordinate system of fictional phase for the abstract range of the inertial system.^[1] <<http://batangs9.com/E-1.pdf>>

The inertial system of a train in motion passes through the gravitational field of the earth like an invisible ghost. However, the earth's gravitational field has its own independent space system and moves at a revolving speed together with the globe. The inability to recognize this structural difference between the inertial system and the gravitational field will lead to the emergence of an anomalous claim like the special theory of relativity.

In the course of explaining the principle behind an object in motion,

Einstein did not reflect the properties and role of elementary particles. In Einstein's position, if he was able to recognize that the inertial system of the train is formed through the distribution of elementary particles, and the situation wherein all elementary particles of the train pass through(move) individually, like a bullet, he would have not asserted the special theory of relativity.

2. The fictiveness of the law of the constant speed of light.

2-1. The earth's gravitational field formally(controllingly) conserves the progress path and propagation speed of light waves. Additionally, the inertial system of a moving train passes through the earth's gravitational field like an invisible ghost. Therefore, the speed of light equating to $C+V$ must be detected from the interior of a moving train. However, there are no experiments conducted for measuring the propagation speed of light waves in the perspective of a moving observer in the historical development of physics to date. For instance, the interferometer of Michelson-Morley exists in a quiescent state in the gravitational field of the earth.^[2] <<http://batangs9.com/E-2.pdf>>

When the original form of light is in motion and the observer is in a stationary position on the earth's gravitational field, the propagation speed of light waves measured in the perspective of the observer does not change. Therefore, an independent coordinate system can be set to the stationary observer as a temporary measure. In the context of these conditions, the law of the constant speed of light in the special theory of relativity can be misunderstood as valid.

If the Michelson-Morley's interferometer experiment was performed in a satellite at high altitude, it is assumed that the summation effect of $C+V$ could be verified. Also, if a mirror was installed at the front or

back of a train moving at the speed of light, the observer inside the train would not be able to observe his/her appearance.

Some physicists from universities are proposing new alternatives to resolve the flaw in the law of the constant speed of light, but the new alternatives they propose also possess a shortcoming regarding another condition. For instance, it is explained that when an observer is stationary on the surface of an expanding rubber balloon, the law of the constant speed of light stands true for the stationary observer. However, to an outside observer who recognizes the expansion rate of the balloon, the summation effect of $C+V$ (V = expansion speed of the balloon) is observed and the law of the constant speed of light is invalid.

There are cases that reduces the flaw in the law of the constant speed of light through the logic of a moving walkway. The observer of a moving walkway can simultaneously verify his/her own distance and the propagation distance of light waves. Therefore, the final propagation speed measured by the observer of a moving walkway must have a summation structure of $C+V$ (V = speed of motion of the moving walkway). In other words, the law of the constant speed of light does not apply to the observer of a moving walkway.

The speed of motion of the moving walkway is reflected as the change in the wavelength of the Doppler effect of light waves. Therefore, the Doppler Effect that reflects the movement speed of the moving walkway and the law of the constant speed of light that does not reflect the speed of movement, contradicts with each other. Considering the validity of the Doppler Effect, the law of the constant speed of light must be discarded.

2-2. Einstein's law of the constant speed of light has an ambiguous abstract image and its origin is also unclear. In order to resolve the

ambiguity in the law of the constant speed of light, and to clearly understand the nature of the speed of light, it is convenient to deal with the value of the speed of light in terms of distance.

The special coordinate axis of X, Y, Z in outer space formally conserves distance(L). Therefore, a clear understanding of the distance(L) is possible. Furthermore, the observer in motion can simultaneously identify his/her own distance of movement and the propagation distance of light waves. Here, assuming that the propagation distance of light waves is L_1 , and L_2 for the distance of movement by the observer, the propagation distance of L_1 and the movement distance of L_2 simultaneously forms(*occurs*) at the time of t .

In the position of a moving observer, the displacement of the measured light wave has a size of $L_1 + L_2$, and time(t) does not act as a variable. Therefore, the propagation speed of light waves must be expressed in the form $C + V$ through the summation structure of $\frac{L_1}{t} + \frac{L_2}{t}$. The law of the constant speed of light is not valid to an observer of motion in this way.

2-3. The propagation speed of light waves is expressed as displacement(L) for time(t), and has a structure of $C = \frac{L}{t}$. In addition, the speed of light($C = \frac{L}{t}$) is not expressed through a schematic diagram. It is very difficult to clearly understand the speed of light($C = \frac{L}{t}$). This is because time(t) which progressively changes is included in the speed of light($C = \frac{L}{t}$).

Einstein recognized that time axis(T) is formed due to the speed of

light(c). Here, if the time axis(T) moves at speed(v), the speed of light (c) which forms the time axis(T) must be displaced at a speed of V . Therefore, the inner properties of time axis(T) can have the effect of $C+V$. However, the law of the constant speed of light in the special theory of relativity does not recognize the existence of $C+V$. If the law of the constant speed of light is chosen, the existence and role of the speed of movement(v) cannot be explained.

The displacement of light waves and the distance of movement of the observer measured in the position of an observer in motion are simultaneously formed in an equivalent time(t). In other words, the time(t) included in the speed of light($c=\frac{L}{t}$) and the time(t) applied to the observer in motion are the same object. Therefore, the propagation speed of light waves measured in the position of an observer in motion must have a size of $C+V$. In terms of this logic, the law of the constant speed of light must be discarded.

Einstein's law of the constant speed of light requires the condition that the time of the speed of light is invariantly maintained, and only the time of the moving observer changes. In other words, the time of the speed of light included in the law of the constant speed of light does not change, and only the time of the moving observer must be reduced in the ratio of the Lorentz coordinate transformation equation. The law of the constant speed of light with this condition has a logical flaw wherein the displacement effect of the speed of light and the movement effect of the observer, with the same time(t), applies as a two-fold value.^[2]

<http://batangs9.com/E-2.pdf>

3. The characteristics of time and the fictiveness of the time axis.

3-1. Einstein's special theory of relativity argued that the time of a moving object changes. Here, the time of the object in motion must be changed due to its own speed of movement. However, Einstein's argument has a self-contradicting logical fallacy. This is because time(t) is included in the speed of movement of $C = \frac{L}{t}$, but the time of $C = \frac{L}{t}$ includes a premise that time should not change.

If the time of a moving object changes due to the time in $C = \frac{L}{t}$, the time of the object is dependent on the time of $C = \frac{L}{t}$, and the time of object must be independently separated from the time of $C = \frac{L}{t}$. However, the time of the object and the time in $C = \frac{L}{t}$ are equivalent objects, and they are not mutually dependent. The special theory of relativity in this sense, cannot be free from the cycle of distortion wherein the equivalent time(t) changes due to time(t).

Einstein regarded a moving object of constant velocity as a stationary inertial system. The time of this stationary inertial system must almost unchangingly maintain its original value. In another sense, it is explained that a moving object with constant velocity has a slow time in the special theory of relativity. For instance, someone traveling in outer space ages less, and the life span of a muon moving at a quasi-speed of light is longer.

The claim that time is unchanging in a stationary inertial system moving at constant velocity and the claim that an object moving at constant velocity has a slow time, cannot exist at the same time. Therefore, one of the claims must be discarded.

3-2. The special theory of relativity argues a 4-dimensional

space-time model wherein the coordinate axes of space X, Y, Z and the time axis $T(ct)$ are assembled. Here, the time axis(T) is recognized as being formed due to time(t). However, time(t) is defined as pure scalar, and cannot play the functions of a coordinate axis. Therefore, time axis (T) must be viewed as a fictional phase that does not exist. Of course, the 4-dimensional space-time model that includes the time axis(T) is also a fictional phase.

The nature of time is that it continuously changes and is not formed through substantive factors. Time with these conditions cannot be expressed through a schematic diagram and it has an unclear abstract image. In addition, it is very difficult to recognize the time with an abstract image. Therefore, even if the meaning of time is distorted and misused, the distortion and misuse of time cannot be clearly grasped.

When a clear understanding of the nature of time is insufficient, an unusual claim like the 4-dimensional space-time model may emerge. In other words, the effect of time is expressed but the time axis of a formal system does not exist. For instance, a regular clock is merely a tool that produces time and cannot have the function of a coordinate axis. In terms of this logic, the 4-dimensional space-time model which introduced time(t) in the time axis(T) must be discarded.

3-3. Scalar time is expressed in a one-dimensional linear structure, two-dimensional plane structure, and also in a three-dimensional structure. In other words, time exists in all coordinate axes of X, Y and Z that forms the outer space. This is because speed($v = \frac{L}{t}$), which includes time(t), acts on the interior of all dimensions(one-dimensional, two-dimensional, three-dimensional). Therefore, all coordinate axes of X, Y and Z must have its individual effect of time.

In order to verify the distance of 300,000 Km in the position of an

observer by experience, a time of 1 second is necessary. This logic signifies that in all coordinate axes of X , Y and Z , consisting of a distance equal to $300,000 \text{ Km}$, time acts individually. Therefore, in the spatial coordinate axis of X , Y and Z , a separate time axis(T) cannot be independently set. Hence, the time axis(T) set by Einstein is a fictional phase that does not exist substantially.

Outer space has a subject of comparison in the coordinate axis and the subject of comparison in the coordinate axis is distributed in a three-dimensional form. Likewise, outer space is composed of substantial elements, and the substantial elements of space and the spatial coordinate axes X , Y and Z maintain a corresponding relationship. In other words, the substantial elements of outer space are the subjects of comparison in the coordinate axis.

However, time(t) is not composed of substantial elements, and a subject of comparison for time axis(T) does not exist as well. Furthermore, time (t) undergoes a process wherein it continuously changes within the spatial coordinate axes(x, y, z). This effect of time cannot act on the exterior of the spatial coordinate axes. If the effect of time acts on the exterior of the spatial coordinate axes, three additional time axes are needed which correspond to the spatial time axes X , Y and Z .

The effect of time is expressed in outer space because space has its own unique quality and this quality reacts with the resilience of the speed of light. In other words, the quality of the outer space and the propagation speed($\frac{L}{t}$) of light waves are defined and the propagation speed of light waves is expressed as an effect of time. Here, all physical phenomena that are manifested by using the quality of space as a medium are controlled by the speed of light and have the same time value in common.

The effect wherein the action of all physical phenomena are controlled by the speed of light can be specifically expressed through the “absolute batangs factors” of the author. Here, a part of the “absolute batangs factors” and the Lorentz coordinate transformation equation are configured in the same form but the threshold requirement and the process of deriving the two equations are totally different. For instance, there is a difference in how the 4-dimensional space-time model is a premise in the derivation of the Lorentz coordinate transformation equation, and the derivation of the “absolute batangs factors” makes use of the quality of outer space.^[3] <<http://batangs9.com/E-3.pdf>>

4. The major flaw in the space-time model.

4-1. In the 4-dimensional space-time model argued by Einstein, the spatial coordinate axes X, Y, Z and the time axis(T) must possess structural continuity and must be functionally connected. However, length and time exist in totally different forms and the two does not mutually depend on each other. Therefore, length and time cannot be integrated into one system.

The coordinate axes X, Y and Z are composed of length(distance) in the three-dimensional outer space and the coordinate axis of length formally maintains location and direction. However, the nature of time must continue to change even in the present. Time under these conditions does not have a location and direction and cannot be used as a coordinate axis.

Time does not have the function of energy, and does not lead to the action of physical phenomena. Additionally, the effects of time are expressed under control in the interior of spatial length. For instance, in order to experience a distance of 300,000 Km , 1 second is needed. A logic like this signifies that time(t) is included in the properties of length (L).

The length of space formally preserves location and direction and a three-dimensional area is formed due to the directional nature of length. However, time(t) is pure scalar which changes even at the present and does not possess a dimensional area. Therefore, time(t) cannot form a new dimensional time axis. In terms of this logic, a 4-dimensional space-time model(X, Y, Z, T) that deals with length and time as equivalent dimensions must be discarded.

4-2. In the 4-dimensional space-time model argued by Einstein, all coordinate axes of X , Y and Z must intersect a vertical direction with the time axis(T), and the vertically directed intersection must be simultaneously maintained in all coordinate axes of X , Y and Z . Even if the time axis(T) is curved or deformed, the mutual relationship of all coordinate axes must be intersected in a vertical direction of 90° .

However, in the perspective of geometric logic, all coordinate axes X , Y , Z and time axis(T) cannot simultaneously intersect. For instance, if the time axis vertically intersects at 90° , all coordinate axes X , Y and Z will require 2 additional time axes. In the intersecting combination process under these conditions, a 5-dimensional space-time model is formed.

The nature of time is that it continuously changes and does not have a geometric structure. Therefore, changes in time cannot be expressed through a clear schematic diagram. In other words, the change in time can only be understood as an abstract image and the use of the coordinate axis is impossible. In the perspective of this logic, the 4-dimensional space-time model must be viewed as a fictional phase that basically cannot be established.

The effect of time is expressed only within the three dimensions and cannot get away from the three-dimensional structure. In other words, all coordinate axes of X , Y and Z must have an individual effect of time.

Here, all coordinate axes of X, Y, Z is formed with the length of the same element and the effects of time are expressed due to the characteristics of spatial length. Therefore, all coordinate axes of X, Y and Z can share time and speed of light with equivalent value.

Frankly speaking, there is probably no physicist in the world who recognizes a 4-dimensional space-time model(X, Y, Z, T), wherein the time axis(T) and all coordinate axes of X, Y and Z assemble, as a clear image. Despite this, the closed modern physics of universities forcibly coerces the unconditional acceptance of a 4-dimensional space-time model. It is a really wrong way of learning.

4-3. In the 4-dimensional space-time model(X, Y, Z, T) argued by Einstein, the spatial coordinate axis of X, Y, Z and the time axis(T) combines into one system. The time axis(T) here must have its own dimensional area. Therefore, if the coordinate axes of X, Y, Z and the time axis(T) combines, the range of outer space can be additionally extended to the extent of the area of time axis(T). For instance, an 11-dimensional outer space possesses a wider area than a three-dimensional outer space.

In the 4-dimensional space-time model, the coordinate axes of all dimensions must intersect in directions different from each other. Therefore, even if the time axis(T) intersects in a vertical direction with the spatial coordinate axes of X, Y, Z , the areas of all dimensions do not redundantly overlap. As the number of dimensions increases(3 dimensions \rightarrow 4 dimensions), the overall range of the universe can be extended, but the spatial density remains uniform.

The coordinate axes of all dimensions must have a subject of comparison with substantial elements. For instance, spatial length(distance) is the subject compared in relation to the coordinate axes X, Y, Z . The

coordinate axis of length has a limit of being distributed in a three-dimensional form, and cannot be distributed in a form with 4 dimensions or more. Therefore, all coordinate axes of 9-dimensional and 11-dimensional structures must be viewed as having no subjects of comparison with substantial elements. This logic signifies that the 9-dimensional and 11-dimensional space-time model are both fictional phases.

Einstein's general theory of relativity requires a premise that three-dimensional objects and an 11-dimensional outer space possess a structural continuity and are functionally connected. However, a three-dimensional object cannot exist in an 11-dimensional outer space. If outer space is formed in an 11-dimensional structure, all objects and fields of energy must also possess an 11-dimensional structure. In other words, an object and energy field with a structure of another dimension cannot simultaneously coexist.

Objects and energy fields of another dimension do not have structural continuity, and cannot mutually act on each other. For instance, as a three-dimensional object do not react to a two-dimensional planar structure, a three-dimensional object and an 11-dimensional outer space do not mutually act on each other. In the perspective of this logic, the black hole or superstring theory in the general theory of relativity must be discarded.^[2] <<http://batangs9.com/E-2.pdf>>

5. The threshold requirement of the Lorentz coordinate transformation equation.

5-1. Disassembling the Lorentz coordinate equation $\frac{1}{\sqrt{1-\frac{V^2}{C^2}}}$ derived

from Einstein's special theory of relativity in reverse order, the final results of disassembling undergoes the transformation process of

$\frac{1}{\sqrt{\frac{C^2 - V^2}{C^2}}}$ and returns to the summation structure of $C+V$. In other

words, the Lorentz coordinate transformation equation was derived due to the process of arranging the summation structure C^2+V^2 in a simplified form. If the existence of C^2+V^2 is denied, deriving the Lorentz coordinate transformation equation is absolutely impossible.

The two coordinate systems S and S' , set as premises in deriving the Lorentz coordinate transformation equation are fictional phases. Certainly, the displacement process $X \rightarrow X'$, wherein the coordinate axis of X is moved to the position of X' is also a fictional situation. In other words, in deriving the Lorentz coordinate transformation equation, another unrevealed and unknown effect was misunderstood as the displacement action of the coordinate system(S). For instance, the displacement effect of $X \rightarrow X'$, where the coordinate axis of X moves, is a symbolical reflection of another unknown effect.

Though the Lorentz coordinate transformation equation was derived through anomalous means using the two coordinate systems(S, S') with fictional phases, it validly expresses a real physical phenomenon. This logic signifies that the form of the Lorentz coordinate transformation equation derived through anomalous means, is normally formed. Therefore, the Lorentz coordinate transformation equation can be utilized as a temporary measure in the process of expressing the quantitative value of a physical phenomenon.

5-2. The form of the Lorentz coordinate transformation equation was derived through the summation structure $C+V$. In order for the summation structure $C+V$ to be normally established in this situation, C and V of independent factors must be combined(integrated) into one vector value in the linear coordinate axis(X). This logic signifies that the

Lorentz coordinate transformation equation was derived using one absolute coordinate system.

The two coordinate systems S and S' set by Einstein was merely used once, in the first and last, in order to derive the Lorentz coordinate transformation equation and until today, there is no case wherein they are used under other conditions. For instance, the general theory of relativity(theory of gravitation) uses a space-time model with absolute standards.

The Lorentz coordinate transformation equation was derived using one absolute coordinate system, but it is effectively applied in the earth's gravitational field. Therefore, the earth's gravitational field can be assumed to have one absolute coordinate system. If one denies the existence of an absolute coordinate system, the summation structure $C+V$ would not be valid, and it would be impossible to derive the Lorentz coordinate transformation equation.^[3]

<<http://batangs9.com/E-3.pdf>>

Considering the situation wherein the action of all physical phenomena is exactly expressed by the Lorentz coordinate transformation equation, the internal properties of all physical phenomena can be assumed to have the effects of $C+V$. For instance, in the interior of the elementary particles in motion, the effects of $C+V$ are realistically taking action but the existence of $C+V$ was simply not detected(verified) until today. If the secret of $C+V$, hidden among the inner properties of elementary particles in motion, could not be found, the chaotic cycle of the ambiguity in the special theory of relativity, would not end.

III. Conclusion.

The two coordinate systems S and S' set in deriving the Lorentz coordinate transformation equation are a fictional phase that are not

based on the inertial system. In other words, the Lorentz coordinate transformation equation was derived using the two coordinate systems (S, S') with fictional phases. However, the Lorentz coordinate transformation equation exactly expresses the physical phenomena in nature. The situations with these conditions suggest that though the form of the Lorentz coordinate transformation equation was derived using the coordinate system of a fictional phase, it is normally configured.

The Lorentz coordinate transformation signifies that it is derived using one absolute coordinate system. Additionally, the Lorentz coordinate transformation system is validly being used in outer space and in the gravitational field of the earth. Therefore, the outer space and the earth's gravitational space can be seen as having one absolute coordinate system.

If the basis of the outer space and the earth's gravitational field has one absolute coordinate system, even if ether (assumed as the medium of light waves in classical physics) is introduced, its introduction can be accepted in favorable conditions. In other words, in the space model wherein one absolute coordinate system is set, there is no basis to reject the introduction of ether.

In classical physics, ether was pointed out as the substantial elements of outer space. However, in the author's position, in order to differentiate ether from classical physics, it is called "**batangs**" for convenience. The reason why ether is differentiated from "**batangs**" in this paper is because ether and "**batangs**" exist in completely different conditions, and the quality (physical quality, substantial functions) of ether and "**batangs**" are absolutely different.

In the new spatial model composed of "**batangs**", the theory of relativity and the quantum mechanics of modern physics must be discarded. In addition, in the author's position, an "**absolute theory**" of a new paradigm can be proposed as a new alternative to the theory of

relativity and quantum mechanics. The principle behind all physical phenomena in this “absolute theory” is explained using the quality of “batangs”. For instance, the speed of light(c) is expressed through the quality of “batangs”, and the speed of light(c) reflects the quality of “batangs”. As such, the “absolute theory” which explains the principle behind all physical phenomena using the quality of “batangs” is specifically introduced in the book(Title: Jeoldaeseongiron Book 1 and Book 2) of the author.

IV. References of the Cyber site

- [1] young sik, kim. <Flaws of Newton’s Mechanics and Distorted Concepts Adopted by Modern Physics>. 2016. (<http://batangs9.com/E-1.pdf>)

- [2] young sik, kim. <The Defect in the Special Theory of Relativity and the Formulation of the Absoluteness Theory>. 2016. (<http://batangs9.com/E-2.pdf>)

- [3] young sik, kim. <Spatial Independence of the Earth’s Gravitational Field and Fabrication of the Law of the Constant Speed of Light>. 2016. (<http://batangs9.com/E-3.pdf>)

*** Difference becomes specialty, Ideal becomes reality,
at the center of world in the name of center**

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